

Amendments to the Claims

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-6 (cancelled)

7. (Currently amended) A method of mining a collection of data, the method comprising:

receiving the a-collection of data, the collection of data comprising key words;

converting the ~~received~~ collection of data into labeled data;

combining the labeled data ~~converted-received data~~ into clauses of related data;

assigning a category to one or more key words from the labeled data;

identifying mutually dependent relationships between or among the categorized key words, according to at least one rule defining mutually dependent relationships between or among categorized words;

grouping the identified mutually dependent relationships into groups of related mutually dependent relationships; and

extracting unique concepts associated with the identified groups of related mutually dependent relationships, wherein the step of extracting unique concepts comprises using a mutually dependent relationship extraction rule comprising a string of categories of arbitrary length to be extracted. ~~recognizing the identified groups of related mutually dependent relationships in which a statistical characteristic the related mutually dependent relationships exceed a configurable threshold of the set of related mutually dependent relationships.~~

8. (Previously presented) The method of claim 7 wherein the categorized words identified as being in a mutually dependent relationship exist within separate clauses.

9. (Previously presented) The method of claim 8 wherein the separate clauses

exist within separate sentences.

10. (Previously presented) The method of claim 7 wherein the converting step comprises conversion of the received collection of data into the same format and wherein the received collection of data comprises various data formats.

11. (Previously presented) The method of claim 7 wherein the key words comprise a coherent character string within the clauses.

12. (Previously presented) The method of claim 7 wherein the associating of a category with each key word comprises searching a category dictionary to identify a category which matches the key word.

13. (Previously presented) The method of claim 12 wherein the category dictionary comprises combinations of original expressions, parts of speech, concepts and categories, wherein the original expressions are equivalent to the key words, the parts of speech are a classification of the key words, the concepts are replacement expressions for the key words and the categories represent a larger group having the nature of the key word.

14. (Previously presented) The method of claim 7 wherein the mutually dependent relationships are determined according to rules applied to key words and their associated categories within a clause.

15. (Cancelled)

16. (Currently amended) The method of claim 7 wherein the ~~threshold is~~ mutually dependent relationship extraction rule is provided manually by a user for each of the identified groups of mutually dependent relationships in response to the user being presented a display of all the groups of mutually dependent relationships, at a GUI.

17. (Currently amended) The method of claim 7 further comprising presenting the

identified groups in which the mutually dependent relationship extraction rule applies threshold ~~was exceeded~~ to a user at a GUI.

18. (Currently amended) The method of claim 7 further comprising comparing the identified groups in which the mutually dependent relationship extraction rule applies threshold ~~was exceeded~~ against a set of rules to determine a course of action, wherein the course of action comprises automatically notifying a user that the mutually dependent relationship extraction rule applies threshold ~~was exceeded the exceeding of the threshold, logging the exceeding of the threshold in a user accessible file, or ignoring the exceeding of the threshold.~~

19. (Currently amended) The method of claim 7 wherein the mutually dependent relationship extraction rule is set of rules ~~are~~ predefined.

20. (Currently amended) The method of claim 7 wherein the mutually dependent relationship extraction rule is set of rules ~~are~~ entered manually by a user during a request by the user for specific relationships between categories, whereby mutually dependent relationships by categories are defined by the user according to the user's needs.

21. (Currently amended) An article of manufacture, embodying logic to perform a method of mining a collection of data, the method comprising:

receiving a collection of data, the collection of data comprising key words;

converting the received data into [[a]] labeled data ~~a common format~~;

combining the converted received data into clauses of related data;

assigning a category to one or more key words from the labeled data;

identifying mutually dependent relationships between or among the categorized words, within each of the clauses;

grouping the identified mutually dependent relationships into groups of related mutually dependent relationships; and

identifying the groups including mutually dependent relationships by using a mutually dependent relationship extraction rule comprising a string of categories of arbitrary length to be extracted ~~occur at a frequency greater than a threshold with respect to the set of mutually dependent relationships,~~

~~whereby a search query is not required.~~

22. (Previously presented) The article of manufacture of claim 21 wherein converting comprises conversion of the received collection of data into the same format, wherein the received collection of data is made up of various data formats.

23. (Previously presented) The article of manufacture of claim 21 wherein the key word comprises a coherent character string within the clauses.

24. (Previously presented) The article of manufacture of claim 21 wherein the associating of a category with each key word comprises searching a category dictionary to identify a category which matches the key word.

25. (Previously presented) The article of manufacture of claim 24 wherein the category dictionary comprises combinations of original expressions, parts of speech, concepts and categories, wherein the original expressions are equivalent to the key words, the parts of speech are a classification of the key words, the concepts are replacement expressions for the key words and the categories represent a larger group having the nature of the key word.

26. (Previously presented) The article of manufacture of claim 21 wherein the mutually dependent relationships are determined according to rules applied to key words and their associated categories within a clause.

27. (Cancelled).

28. (Canceled).

29. (Currently amended) A system for data mining, comprising:

a data conversion subsystem for receiving an input of inquiry data and for providing labeled data;

a concept extraction subsystem for assigning a category to a key word of input labeled data and for extracting concepts from among the key words to which a category is assigned; and

a ~~search~~/characteristic detection subsystem for receiving labeled data with concepts and for extending unique concepts, a unique concept being a concept whose statistical characteristic is distinguished beyond a threshold with respect to the set to which it belongs.

30. (Currently amended) A data mining service comprising:

a data conversion service for receiving an input of inquiry data and for providing labeled data;

a concept extraction service for assigning a category to a key word of input labeled data and for extracting from among the key words to which a category is assigned; and

a ~~search~~/characteristic detection service for receiving labeled data with concepts and for extending unique concepts, a unique concept being a concept whose statistical characteristic is distinguished beyond a threshold with respect to the set to which it belongs.